

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Astragalus membranaceus*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(3R)-(-)-7,2'-DIHYDROXY-3',4'-DIMETHYLISOFLAVAN7-O-BETA-D-GLUCOPYR...	Plant	--	--		
0	2',3'-DIHYDROXY-7,4'-DIMETHOXYISOFLAVONE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	2'-HYDROXY-3',4'-DIMETHOXYISOFLAVONE-7-O-BETA-D-GLUCOSIDE	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	3'-HYDROXYFORMONONETIN	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	3-O_BETA-DXYLOPYRANOSYL-25-O-BETA-D-GLUCOPYRANOSYL-CYCLOASTRAGENOL	Plant	--	--		
0	6AR,11AR-10-HYDROXY-3,9-DIMETHOXYPTEROCARPAN	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	7,3'-DIHYDROXY-9,10-DIMETHOXYP TEROCARPANE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	9,10-DIMETHOXYP TEROCARPAN-3-O-BETA-D-GLUCOSIDE	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ACETYL-ASTRAGALOSIDE-I	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
3	ALANINE	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	ARGININE	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
112	ASCORBIC-ACID	Root	--	--		
0	ASH	Root	12800	80000	0.35526479427075014	
2	ASPARAGINE	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
3	ASPARTIC-ACID	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ASTRAGALOSIDE-I	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ASTRAGALOSIDE-II	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	ASTRAGALOSIDE-III	Root	--	--		
0	ASTRAGALOSIDE-IV	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	ASTRAGALOSIDE-V	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	ASTRAGALOSIDE-VI	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	ASTRAGALOSIDE-VII	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	ASTRAGALUS-SAPONIN-I	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

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0	ASTRAGALUS-SAPONIN-II	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ASTRAGALUS-SAPONIN-III	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ASTRAISOFLAVAN	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	ASTRAMEMBRANAGENIN	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
3	ASTRAMEMBRANIN-I	Plant	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

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0	ASTRAMEMBRANIN-II	Plant	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ASTRAPTEROCARPAN	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	ASTRASIEVERSIANIN-I-XVI	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
53	BETA-CAROTENE	Root	--	--		
47	BETA-SITOSTEROL	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
14	BETAINE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)

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102	CAFFEIC-ACID	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
28	CALCIUM	Root	560	3500	-0.42742749848868644	
0	CALYCOSIN	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
14	CANAVANINE	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
77	CHLOROGENIC-ACID	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
20	CHOLINE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
24	CHROMIUM	Root	0.3	0.8	-0.40048877739295385	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
2	COBALT	Root	0.4	2.5	-0.4909460027790993	
12	COPPER	Root	1	9	-0.30116857246091955	
57	COUMARIN	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CYCLOGALEGINOSIDE-A	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	CYCLOGALEGINOSIDE-B	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	D-FRUCTOSE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
1	D-GLUCOSE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	FAT	Root	3200	20000	-0.09603792277020924	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
61	FERULIC-ACID	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	FIBER(CRUDE)	Root	--	200000	2.6242208163218135	
0	FIBER(DIETARY)	Root	--	600000	2.2013712801434733	
23	FOLIC-ACID	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
16	FORMONONETIN	Root	--	--		
0	FREE-AMINO-ACIDS	Root	5000	12600		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
22	GABA	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
8	GLUTAMIC-ACID	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	GUM	Root	16000	100000	-0.2627053187642807	
6	IRON	Root	3.2	20	-0.4125973953033244	
0	ISOASTRAGALOSIDE-I	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	ISOASTRAGALOSIDE-II	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	ISOASTRAGALOSIDE-IV	Root	--	--		

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4	ISOFERULIC-ACID	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
28	ISOLIQUIRITIGENIN	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
11	ISORHAMNETIN	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
75	KAEMPFEROL	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

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0	KUMATAKENIN	Root	11	13		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
2	L-3-HYDROXY-9-METHOXYPTEROCARPAN	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
27	LINOLEIC-ACID	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	LINOLENIC-ACID	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
65	MAGNESIUM	Root	800	5000	1.297512854456367	
14	MANGANESE	Root	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	MOLYBDENUM	Root	0.1	10	2.6325714919134473	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
39	NIACIN	Root	--	--		
4	PHOSPHORUS	Root	104	650	-0.5038891291778125	
14	POTASSIUM	Root	1280	8000	-0.5695891878357887	
0	PROLINE	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	PROTEIN	Root	14400	90000	-0.3190660925574092	
176	QUERCETIN	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	RHAMNOCITRIN	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
15	RIBOFLAVIN	Root	0.4	2.5	-0.3445770066726076	
0	RUBIDIUM	Root	11	13	0	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
60	SELENIUM	Root	0.2	1	-0.29131634494743897	
4	SILICON	Root	3.2	20	-0.2510309186692663	
1	SODIUM	Root	64	400	-0.32652648701580106	
0	SOYASAPONIN-I	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
14	SUCROSE	Root	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
0	THIAMINE	Root	0.3	2	-0.46176774546761545	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	WATER	Root	--	840000	0.4631102003256906	
77	ZINC	Root	0.8	5	-0.8399576796962069	